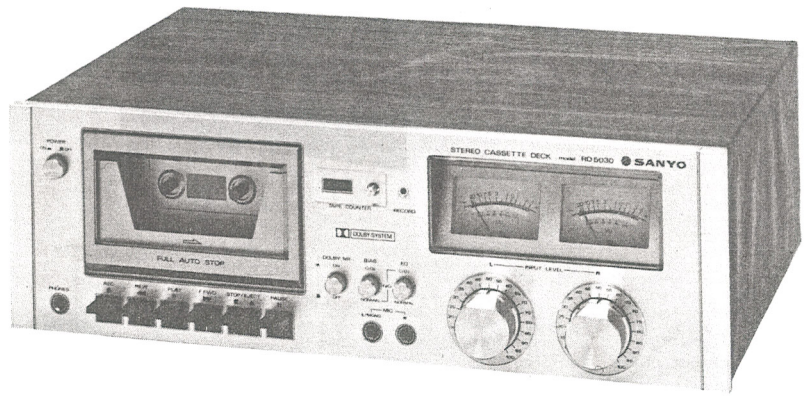
SERVICE MANUAL

CASSETTE TAPE DECK

SANYO

RD5030UM

(EUROPE)



SPECIFICATIONS

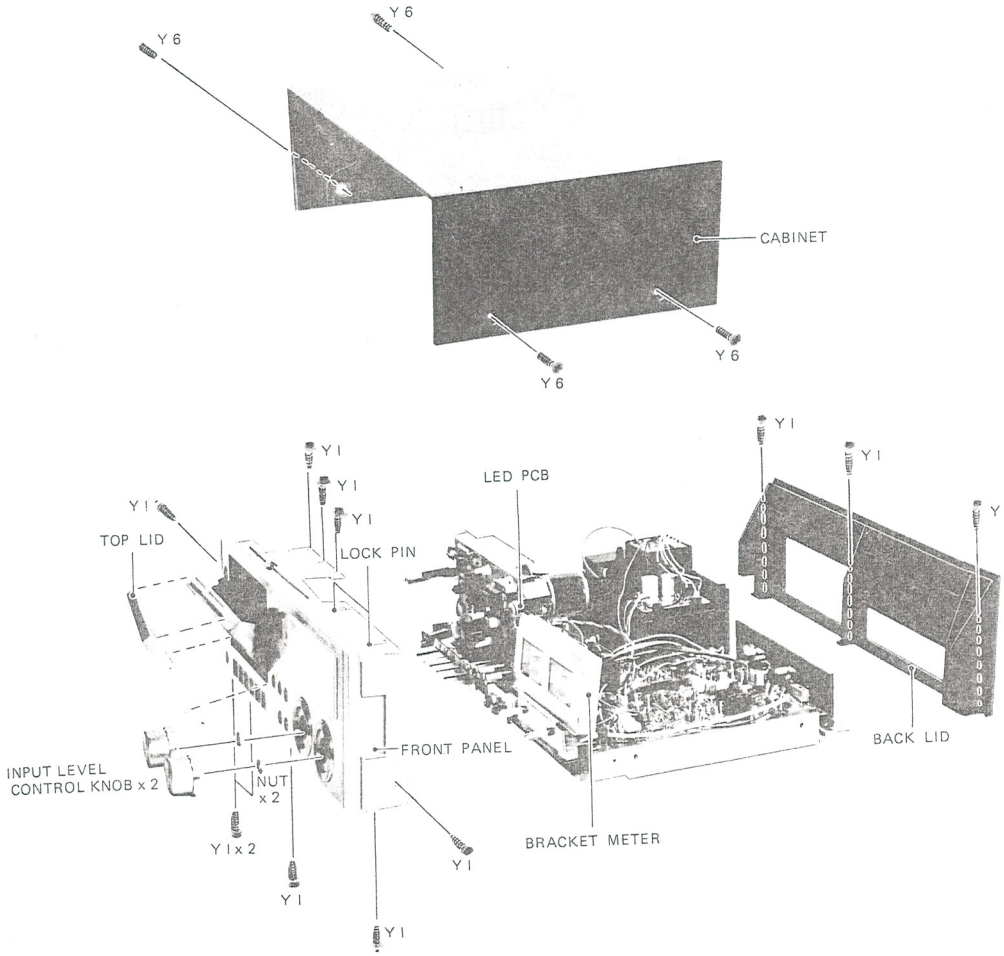
Tape	CrO_2, Fe-Cr and Normal tape
Recording system	AC bias, 1/4 track stereo
Erasing system	AC erasing, 1/2 track
Tape speed	1-7/8 ips. (4.75 cm/sec.)
Recording time	60 min. (C-60 cassette tape)
Rewind & Fast forward time	90 sec. (C-60 cassette tape)
Wow & Flutter	0.08% WRMS
Frequency response	30 – 16,000Hz (CrO_2 tape)
	30 – 16,000Hz (Fe-Cr tape)
	30 – 13,000Hz (Standard tape)
Signal to noise ratio	62 dB (Dolby switch ON)
	54 dB (Dolby switch OFF)

Input	MIC: 3k ohms (0.3 mV))
	REC/PLAY: 10k ohms (1 mV)
	LINE IN: 100k ohms (60 mV)
Output	REC/PLAY: 30k ohms (0.6V)
	LINE OUT: 3k ohms (0.6V)
	HEADPHONES: 8 ohms to
	10k ohms (30 mV)
Power source	AC: 110/125/220V 50Hz
Dimensions:	16-5/8"(W) x 11-5/16"(D) x
	5-1/14"(H) [420x286x132 mm]
Weight	Approx. 10 lbs. 9 ozs. (4.8 kg)

DISASSEMBLY OF CABINET & CHASSIS

Be sure to unplug the power cord before disassembling the cabinet and chassis of this unit. Then, go through the following steps:

1. Remove the four screws (Y6).
2. Removal of front panel
   Pull out two input level control knobs from the front panel. Unfasten and remove two hexagon head nuts and nine Y1 screws. Pushing the lock pins located on the upper right edge of front panel, detach the bracket meter, and lift the hook provided in the center of front panel back side to remove the LED printed circuit board, then the front panel will be cleaned off.
3. Removal of top lid
   Holding both sides of top lid, lift it about 9/16", then the lid is cleared off toward the front side.



Items of adjustment	Tape to be used	Points of measure-ment	Input terminal	Fre-quency	Input level	Equalizer switch	Bias switch	Dolby switch	Places of adjustment	Value
Head azimuth	VTT-658 10 kHz −15 dB	LINE OUT				NORMAL	NORMAL	OFF	Re-adjust-ment of head	Max.
Playback output	MTT-150 (Dolby tape)	LINE OUT VU meter				NORMAL	NORMAL	OFF	SVR101 SVR201	0.75V
VU meter		LINE OUT VU meter	LINE IN	1 kHz	−24 dB			OFF	SVR102 SVR202	0 VU
REC/PLAY frequency response	T308S	LINE OUT	LINE IN	1 kHz 1.0 kHz	−44 dB	NORMAL	NORMAL	OFF	SVR104 SVR204	±0～+1 dB
Playback gain	T308S	LINE OUT	LINE IN	1 kHz	−24 dB	NORMAL	NORMAL	OFF	SVR103 SVR203	0.54V
Dolby		SVR103 SVR203	LINE IN	1 kHz ↓ 2 kHz	−21 dB ↓ −41 dB	NORMAL	NORMAL	OFF ↓ ON	SVR401	+4.3 dB

MODIFICATION NOTICE

SANYO

CASSETTE TAPE DECK

RD 5030UM (EUROPE)

Date Apr. 16, 1979 Issued by

The following corrections should be made in the SERVICE MANUALS and PARTS (PRICE) LIST.

		Section	Key No.	Part No.	Description	Q'ty	Remark	Reason
1	From	Mechanism	138	141-2-231T-51300	Switch, Muting	2		E
	To		138	4-231T-51300	"	2		
2	From							
	To							
3	From							
	To							

INTERCHANGEABLE NOT INTERCHANGEABLE	Serial No. Chassis No.	Effective from
Q'ty of initial production before modification.	Identification of modified unit.	

REASON FOR MODIFICATION

A ..... Standardization
B ..... Change of materials
C ..... Improvement of reliability
D ..... Improvement of performance
E ..... Miss print
F ..... Miss register
G .....

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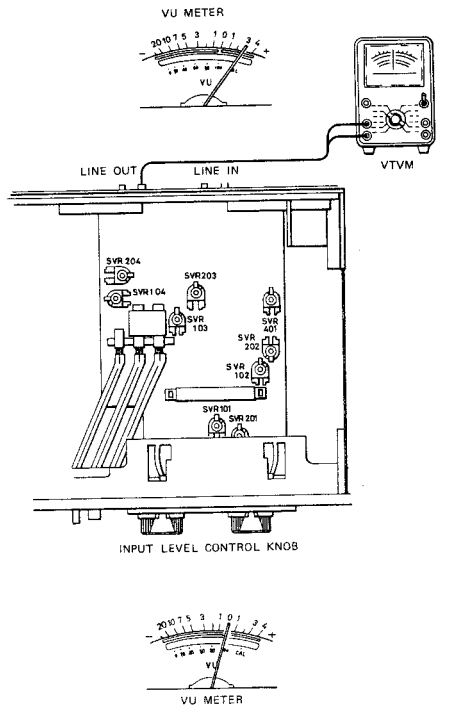
SANYO ELECTRIC TRADING CO., LTD.
OSAKA, JAPAN

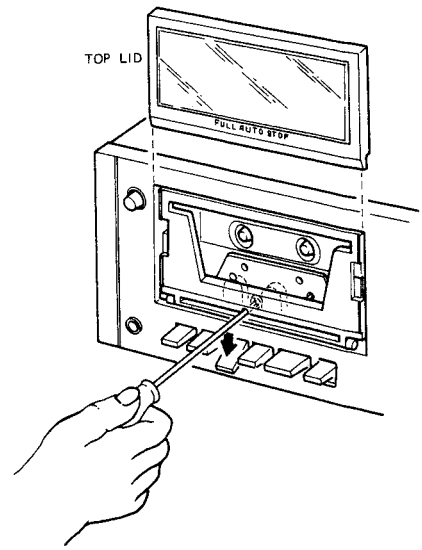
WM- 3987

AMPLIFIER ADJUSTMENT

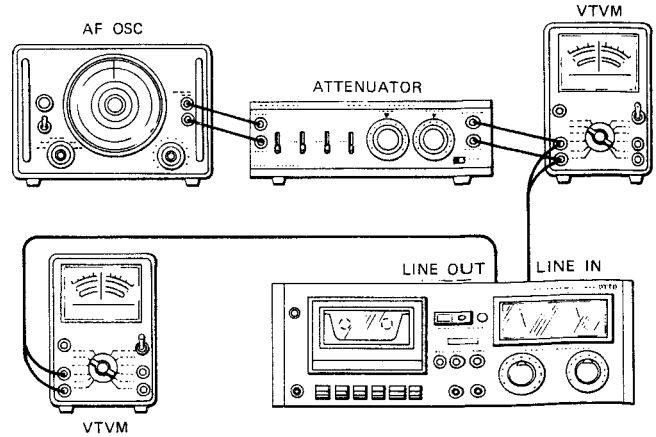
1. Adjustment of head azimuth
   a) Mount test tape (VTT-658) and press the PLAY button.
   b) Make necessary adjustment to obtain the maximum output at LINE OUT by turning the azimuth screw.
   c) Go through the above steps for both the left and right channels, and by turning over and re-mounting the tape cassette.
   * Set to the maximum the knob for output level adjustment.
   (This instruction applies to Sections 2-6.)



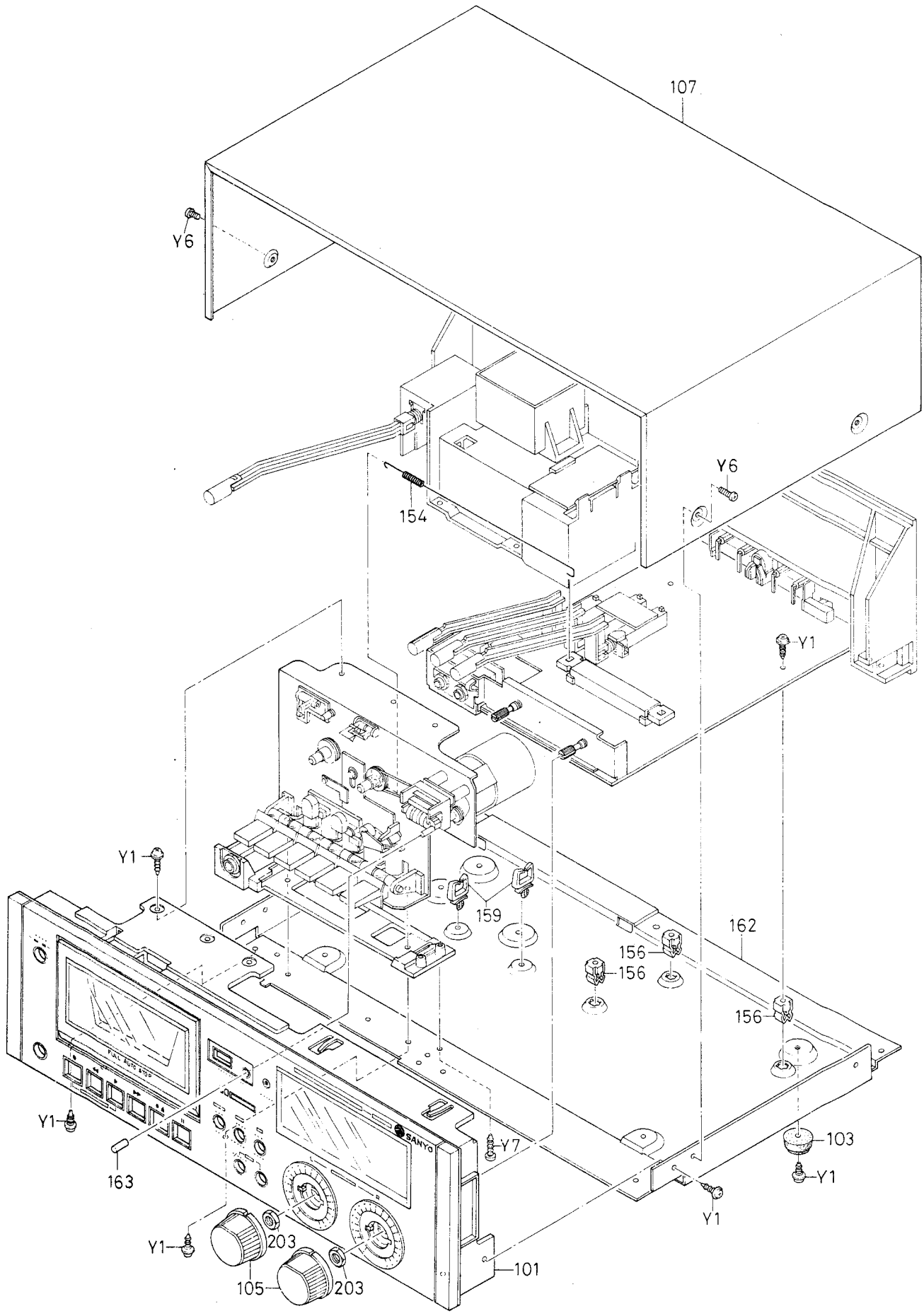
2. Adjustment of output for sound reproduction
   a) Load test tape (MTT-150) on the unit being serviced and press the PLAY button.
   b) Adjust SVR101 and SVR201 to obtain an output of 0.75V at LINE OUT.
   In this case the VU meter reads +3 VU (CAL mark).
3. Meter adjustment
   a) Connect –24dB (1kHz) input signal to LINE IN.
   b) Push the REC, PLAY and PAUSE buttons.
   c) Adjust output at MONITOR to 0.51V by turning the INPUT level adjusting knob.
   d) Adjust SVR102 and 202 until the meter reading becomes 0VU.
4. Adjustment of record/playback frequency response
   a. Connect meters as illustrated below, load with test tape T308S, and set input level control knobs to the position designated in section (3)-c.
   b. Feed input signals –44 dB (1 kHz and 10 kHz) into "LINE IN" terminal to record them.
   c. Play them back. Adjust frequency response, taking 1 kHz as 0 dB, so that output of 10 kHz corresponds to ±0 to +1 dB, by means of SVR104 and 204.
   By this adjustment, meanwhile, the bias current is also adjusted to a proper value.



5. Adjustment of recording gain
   a. Connect meters as illustrated below, load with test tape T308S, and set input level control knobs to the position designated in section (3)-c.
   b. Record signal of –24 dB (1 kHz).
   c. Adjust SVR103 and 203 so that the playback output of the signal above becomes 0.54V with respect to the monitor output of 0.51V at this time.
6. Adjustment of Dolby effect
   a. Connect meters as illustrated above, and press RECORD, PLAY and PAUSE levers.
   b. Feed input signal of –21 dB (1 kHz) into "LINE IN" terminal, and rotate input level control levers until the monitor output becomes 0.72V (with the Dolby switch at "OFF" position).
   c. Connect the VTVM of "LINE OUT" side to test point of SVR103 or 203. (See parts layout.)
   d. Change input signal to –41 dB (2 kHz) and turn on the Dolby switch. Adjust SVR401 so that the variation the test point at this time becomes + 4.3 dB, with the state of par. c above taken as 0 dB.



EXPLODED VIEW (CABINET)



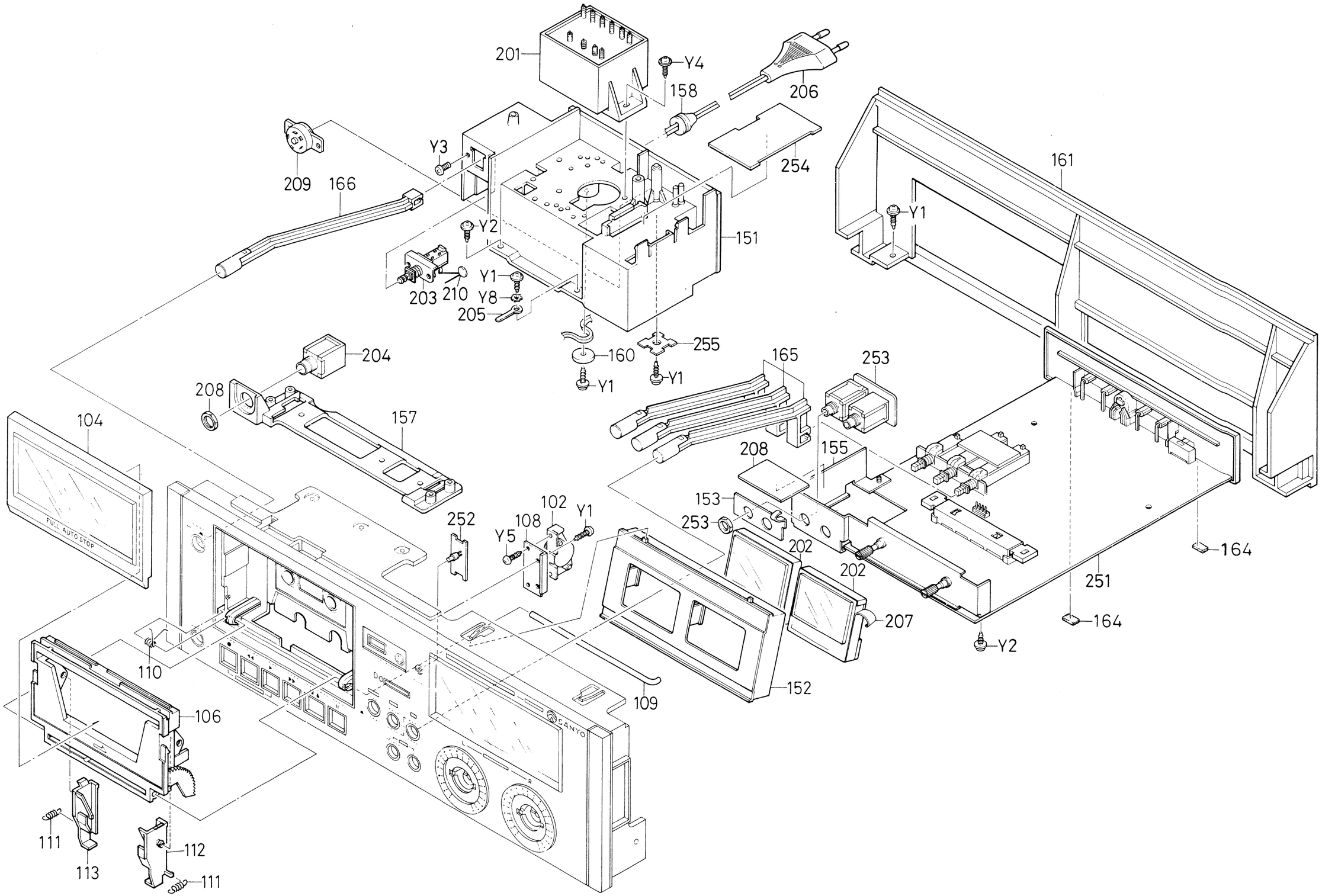
PARTS LIST

Ref. No.	Part No.	Description	Q'ty
PACKING			
	141-6-132T-89103	Individual Carton	1
	141-6-410T-13203	Instruction Manual	1
	141-6-144T-48100	Foam Plastic Case	2
	141-6-231T-10300	Inner Polye Cover, AC Cord	1
	141-6-231T-10200	Inner Polye Cover, Accessary Cord	1
	141-6-231T-50700	Inner Polye Cover, Set	1
	141-6-231T-20300	Inner Polye Cover, Inst B.	1
	141-2-246T-34100	Sheet	2
	141-2-447T-70100	Cushion 60 x 50 x 40	1
ACCESSARY			
	4-241T-12900	Cassette Tape C12	1
	4-243T-13301	Lead Assy	1
CABINET			
101	141-0-122T-24602	Front Panel Assy	1
102	141-0-581T-07100	Gear Assy	1
103	141-0-174T-05102	Stand Assy, Leg.	4
104	141-0-124T-21300	Cassette Comp. Lid Assy	1
105	141-2-163T-52900	Rotary Knob, VR	2
106	141-2-224T-09100	Bracket, Cassette Comp. Lid	1
107	141-0-111T-36302	Cabinet Assy	1
108	141-2-310T-12700	Bracket, Gear	1
109	141-2-753T-42500	Shaft	1
110	141-2-855T-25800	Spring Coil	1
111	141-2-855T-29700	Spring Coil, Cassette Comp. Lid	2
112	141-2-210T-09600	Bracket	1
113	141-2-210T-09700	Bracket	1
CHASSIS			
151	141-0-371T-08405	Bracket, Transformer Assy	1
152	141-0-373T-06402	Bracket Assy, Meter	1
153	141-2-853T-59100	Spring Plate	1
154	141-2-855T-26000	Spring Coil, Rec.	1
155	141-2-214T-02800	Bracket Frame	1
156	141-2-210T-08900	Bracket	3
157	141-2-312T-16300	Sub Chassis	1
158	141-2-445T-16200	Rubber Cushion	1
159	141-2-464T-29900	Fixer	3
160	123-2-453R-10500	Plastic Washer , AC cord	1
161	141-2-126T-24902	Back Lid	1
162	141-2-125T-14801	Bottom Lid	1
163	141-2-156T-06101	Cup Knob, Counter	1
164	141-2-447T-31100	Cushion	2
165	141-0-253T-12100	Joint Assy	3
166	141-0-253T-12200	Joint Assy	1
SCREW MOUNTING			
Y1		Washer Head Tapping Screw 3 x 8mm	24
Y2		Washer Head Tapping Screw 3 x 6mm	3
Y3		Pan Head Screw 3 x 6mm	2
Y4		Washer Head Tapping Screw 3 x 10mm	2
Y5		Tapping Screw 2.6 x 8mm	2
Y6		Binding Head Screw 4 x 6mm	4
Y7		Flat Head Tapping Screw 3 x 8mm	2
Y8		External Toothlock Washer 3mm	1

Ref. No.	Part No.	Description	Q'ty
ELECTRICAL PARTS			
201	4-251T-85100	Power Trans	1
202	4-511T-10400	Meter	2
203	4-231T-78100	Power Switch	1
204	4-235T-44871	Socket, Headphone	1
205	123-2-472R-00600	Lug	1
206	4-243T-77172	Power Cord	1
207	141-2-184T-00201	Tape	1
208	141-2-322T-46200	Shield Plate	1
209	4-231T-53600	Switch, Voltage Select	1
		Ceramic Cap. 0.01μF 500WV C317	1
MAIN PCB ASSY			
251	141-4-230T-62303	P.C Board Assy, Main	1
	4-231T-42100	Switch, Input	1
	4-231T-77000	Switch, R/P	1
	4-231T-77100	Switch, Dolby/EQ/Bias	1
	4-222T-34090	Variable Resistor	2
SVR104, 204	4-222T-39478	Semifixed Variable Resistor 100K-B	2
SVR101, 201, 113, 213, 401	4-222T-39475	Semifixed Variable Resistor 10K-B	5
SVR102, 202	4-222T-39473	Semifixed Variable Resistor 2K-B	2
	4-236T-10271	Plug	1
	4-258T-12800	OSC Coil	1
L102,202	4-252T-04100	Choke Coil	2
L101,201	4-253T-01006	Hi-Frequency Choke Coil	2
	4-255T-01600	MPX Coil	2
	4-235T-55472	Socket, RCA & DIN	1
	4-230T-63000	P.C Board, Connection	1
IC401,501		IC HA11226	1
IC101,201		IC LA3160	1
Q102,202, 103,203, 303,302		Transistor 2SC536 G U	6
Q301		Transistor 2SC400 F P2	1
Q401,501		Transistor 2SC1571 G	2
Q101,201, 104,204		Transistor 2SC945 P	4
D401,501, 304,305, 310		Diode 1S2473	5
D402,502		Diode 1N34A	2
D101,201, 102,202		Diode 1N60FM	4
D306,307, 308		Diode DS442	3
D303		Diode WZ162	1
		RESISTORS	
R125,225, R129,229		Carbon, 1.5K ohm ±10% 1/4W	2
		Carbon, 1.2K ohm ±10% 1/4W	2
R110,210		Carbon, 1K ohm ±10% 1/4W	2
R301		Carbon, 820 ohm ±10% 1/4W	1
R302,403, 503		Carbon, 680 ohm ±10% 1/4W	3
R317		Carbon, 270 ohm ±10% 1/4W	1
R406,506		Carbon, 180 ohm ±10% 1/4W	2
R309		Carbon, 47 ohm ±10% 1/4W	1
R318		Solid, 27 ohm ±10% 1/2W	1
R319		Carbon, 10 ohm ±10% 1/4W	1
R321		Carbon, 8.2 ohm ±10% 1/4W	1
R314,315		Carbon, 560 ohm ±10% 1/4W	2
R117,217		Carbon, 150 ohm ±10% 1/4W	2
R103,203, 303		Carbon, 100 ohm ±10% 1/4W	3
R116,216		Solid, 680 ohm ±10% 1/2W	2
R306		Solid, 8.2 ohm ±10% 1/2W	1
R412,512		Carbon, 1M ohm ±10% 1/4W	2

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
R124,224, 401,501		Carbon, 820K ohm ±10% 1/4W	4
R409,509 411,511		Carbon, 270K ohm ±10% 1/4W	4
R104,204		Carbon, 150K ohm ±10% 1/4W	2
R115,215, 311		Carbon, 100K ohm ±10% 1/4W	3
R114,214, 407,507		Carbon, 47K ohm ±10% 1/4W	4
R126,226, 320		Carbon, 18K ohm ±10% 1/4W	3
R410,510		Carbon, 12K ohm ±10% 1/4W	2
R109,209, 113,213 118,218, 323		Carbon, 10K ohm ±10% 1/4W	7
R112,212		Carbon, 2.7K ohm ±10% 1/4W	2
R105,205, 405,505, 107,207		Carbon, 6.8K ohm ±10% 1/4W	6
R106,206, 123,223, 119,219, 122,222		Carbon, 4.7K ohm ±10% 1/4W	8
R408,508,		Carbon, 3.9K ohm ±10% 1/4W	2
R128,228		Carbon, 5.6K ohm ±10% 1/4W	2
R404,504		Carbon, 3.3K ohm ±10% 1/4W	2
R111,211		Carbon, 2.2K ohm ±10% 1/4W	2
R312		Carbon, 330K ohm ±10% 1/4W	1
R108,208		Carbon, 56K ohm ±10% 1/4W	2
R310		Carbon, 15K ohm ±10% 1/4W	1
		CAPACITORS	
C101,201		Ceramic, 470pF 50V ±20%	2
C123,223		Ceramic, 390pF 50V ±5%	2
C104,204 412,512		Ceramic, 100pF 50V ±10%	4
C402,502		Ceramic, 39pF 50V ±10%	2
C102,202 105,205		Ceramic, 1000pF 50V ±10%	4
C124		Ceramic, 2200pF 50V ±10%	1
C120,220		Ceramic, 1200pF 50V ±10%	2
C314		Myler, 0.033μF 50V ±10%	1
C121,221		Myler, 0.022μF 50V ±5%	2
C118,218		Myler, 0.039μF 50V ±10%	2
C315		Myler, 0.022μF 50V ±20%	1
C404,407, 507,504		Myler, 0.015μF 50V ±5%	4
C119,219		Myler, 0.018μF 50V ±10%	2
C107,207		Myler, 0.022μF 50V ±10%	2
C406,506, 316		Myler, 0.0047μF 50V ±5%	3
C122,222		Myler, 0.0056μF 50V ±10%	2
C410,510		Mylar, 0.1μF 50V ±5%	2
C313,403, 503,109, 209		Electrolytic, 4.7μF 25V	5
C108,208, 111,211, 116,216, 401,501		Electrolytic, 2.2μF 25V	8
C117,217, 110,210		Electrolytic, 1μF 25V	4
C301,302, 312,303		Electrolytic, 47μF 16V	4
C112,212		Electrolytic, 22μF 16V	2
C103,203, 113,213, 114,214, 409,509, 411,309		Electrolytic, 10μF 16V	10
C310		Electrolytic, 47μF 10V	1
C106,206, 311		Electrolytic, 100μF 10V	3
C513		Electrolytic, 470μF 16V	1
C307		Electrolytic, 220μF 16V	1
C306,308		Electrolytic, 100μF 16V	2
LED PCB ASSY			
252	141-4-230T-62400	P.C Board Assy, LED	1
		LED GD4207 RD RE	1
R316		Solid Res., 2.2K ohm ±10% 1/2W	1
MIC PCB ASSY			
253	141-4-230T-62500	P.C Board Assy, Mic	1
	4-235T-44971	Socket	1
	4-235T-42871	Socket, Mic	1
R102,202		Carbon Res., 3.3K ohm ±10% 1/4W	2
POWER SOURCE PCB ASSY			
254	141-4-230T-54801	P.C Board Assy, Power Source	1
D301,302		Diode DS17	2
C305		Electrolytic Cap., 470μF 25V	1
C304		Electrolytic Cap., 1000μF 10V	1
R322		Carbon Res., 1K ohm ±10% 1/4W	1
CONNECTION PCB ASSY			
255		P.C Board Assy, Connection	1


201
Y4
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Y1
204
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157
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155
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153
253
202
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207
Y2
164
251
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Y5
Y1
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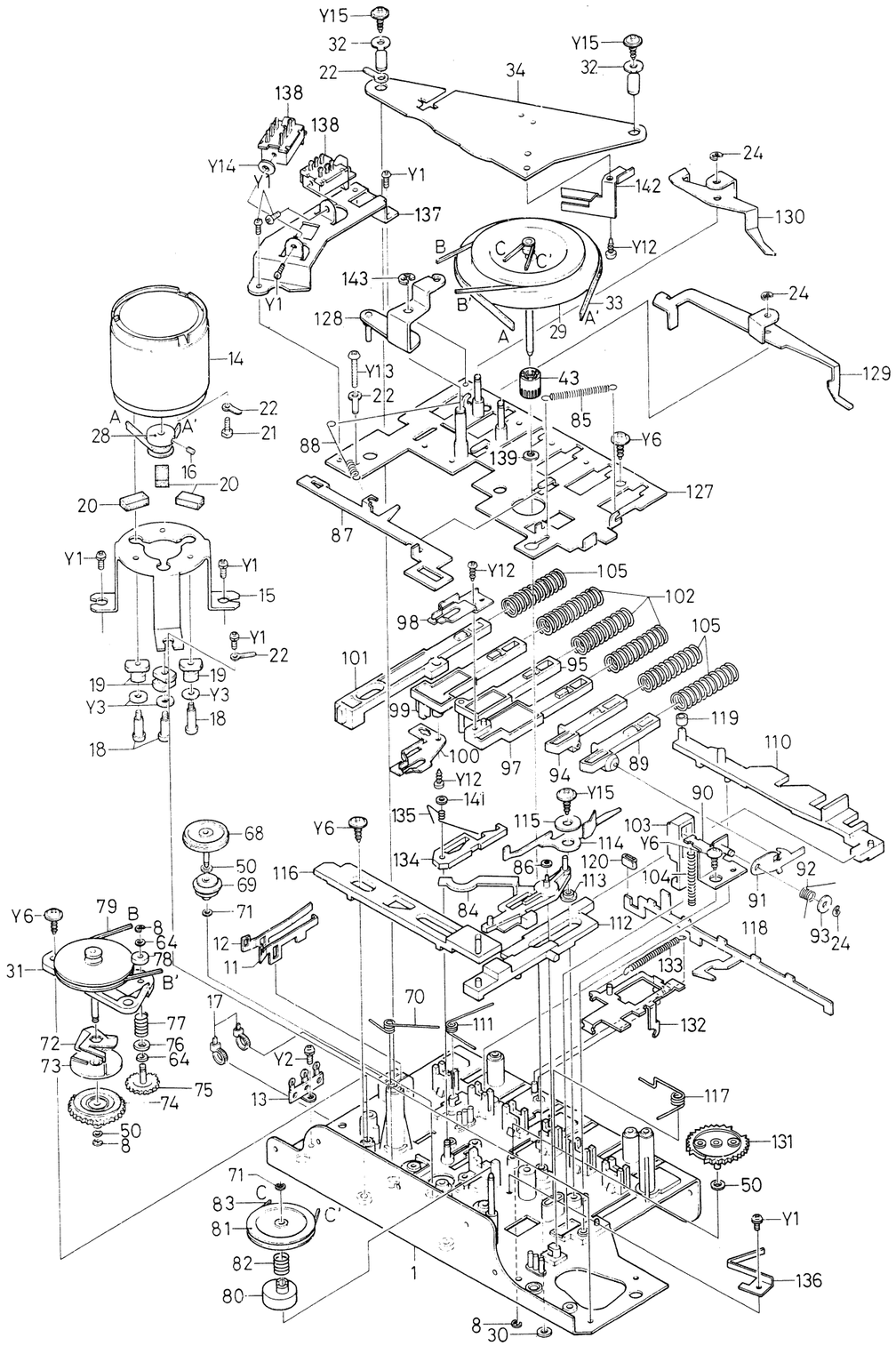
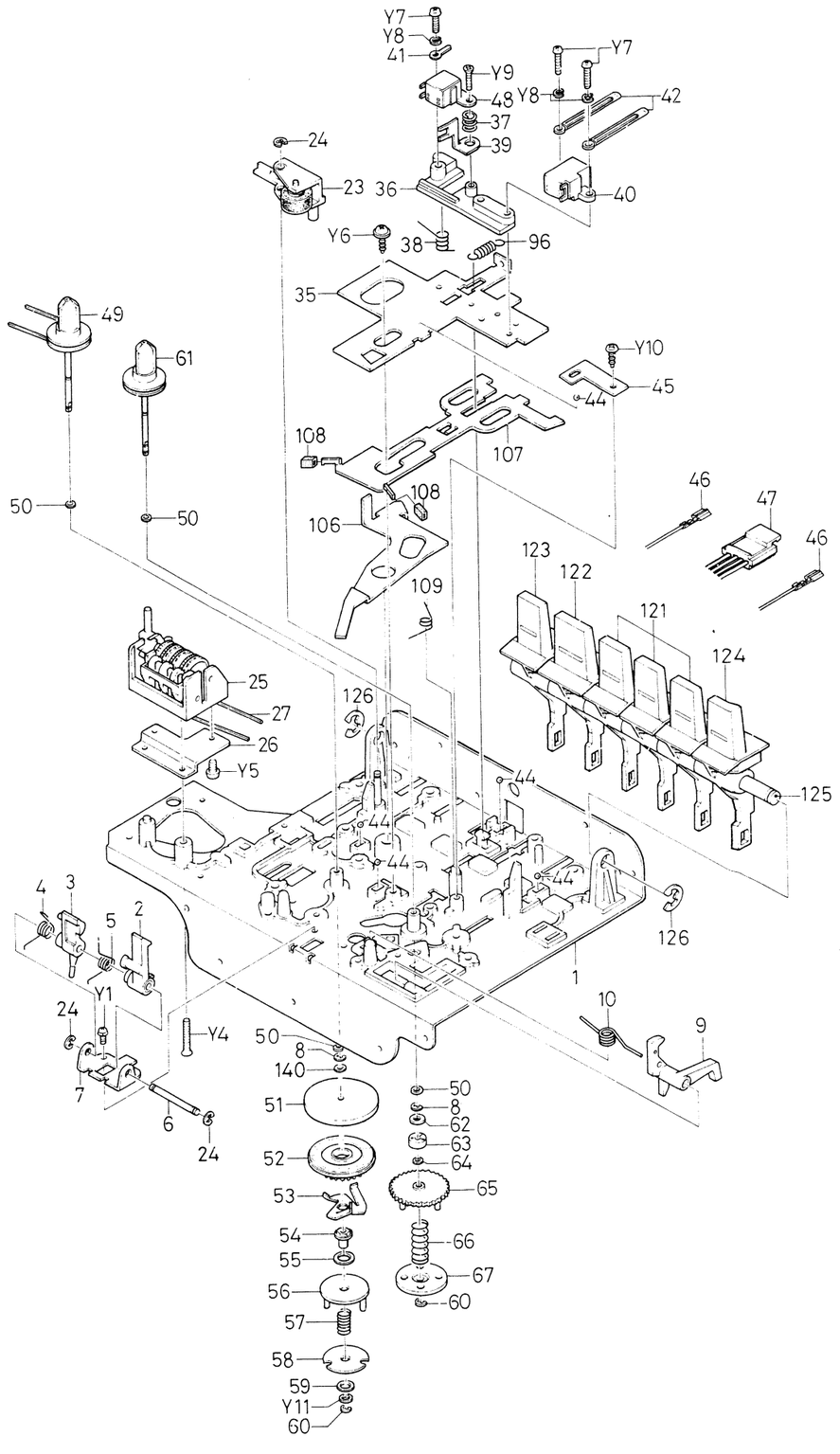
111
FULL AUTO STOP
SANYO

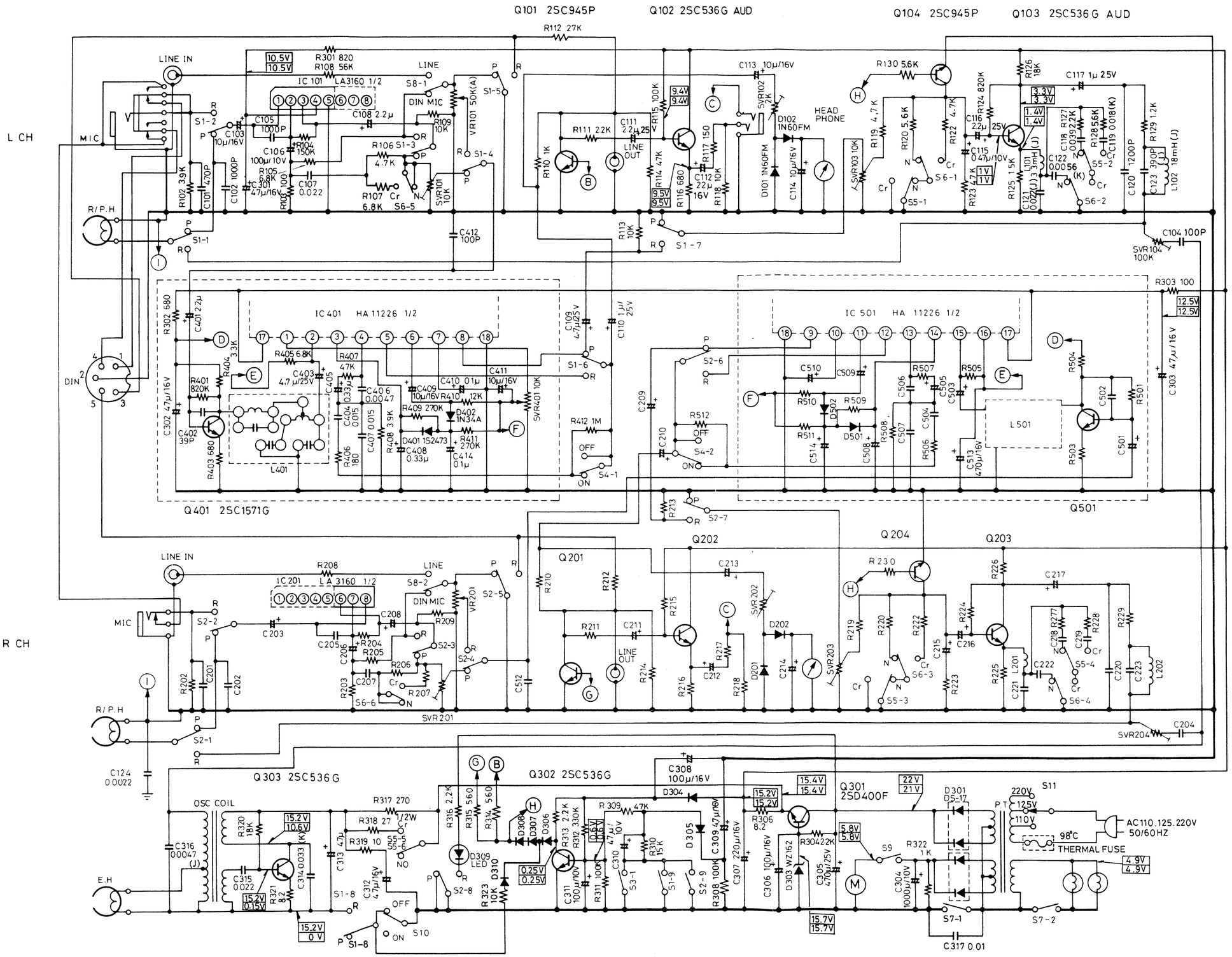
Ref. No.	Part No.	Description	Q'ty
MECHANISM			
1	141-0-311T-28021	Chassis Assy	1
2	141-2-742T-18200	Lever	1
3	141-2-742T-18300	Lever	1
4	141-2-852T-47300	Spring Wire	1
5	141-2-852T-48400	Spring Wire	1
6	141-2-753T-41400	Shaft	1
7	141-2-747T-16400	Bracket, Lever	1
8	141-2-457T-23800	Special Washer	5
9	141-2-742T-14500	Lever	1
10	141-2-852T-47200	Spring Wire	1
11	141-2-853T-48601	Spring Plate	1
12	141-2-853T-48500	Spring Plate	1
13	4-237T-05800	Terminal Board	1
14	4-527T-11400	Motor	1
15	141-2-378T-09100	Bracket Motor	1
16		Head Less Screw	1
17	141-2-464T-20671	Fixer	2
18	141-2-421T-16000	Special Screw	3
19	141-2-445T-11801	Rubber Cushion	3
20	141-2-447T-36001	Cushion	3
21	141-2-421T-22100	Special Screw	1
22	123-2-472R-00400	Lug	5
23	141-0-545T-05000	Lever, Pinch Roller Assy	1
24	141-2-457T-23000	Special Washer	6
25	141-2-811T-04700	Counter	1
26	141-2-812T-07300	Bracket, Counter	1
27	141-2-564T-19100	Square Belt	1
28	141-2-661T-72700 141-2-661T-72701 141-2-661T-72702	or Pully, Motor	1
29	141-0-521T-09000	Flywheel Assy	1
30	141-2-457T-04300	Special Washer	1
31	141-0-661T-27800	Pulley Assy	1
32	123-2-472R-00601	Lug	1
33	141-2-561T-04500	Flat Belt	1
34	141-0-524T-07901	Bracket, Flywheel Assy	1
35	141-2-731T-58601	Slide, Head Base	1
36	141-2-464T-29800	Fixer	1
37	141-2-851T-82700	Spring Coil	1
38	141-2-852T-47400	Spring Wire	1
39	141-2-821T-11600	Tape Guide	1
40	4-242T-20700	E Head	1
41	123-2-472R-00200	Lug	1
42	141-2-472T-05900	Lug	2
43	141-2-581T-12000	Gear	1
44	141-2-345T-00400	Steel Ball	5
45	141-2-853T-54900	Spring Plate	1
46	4-235T-34600	Socket, E Head	2
47	4-235T-53800	Socket R/P Head	1
48	4-242T-21471	Head R/P	1
49	141-0-531T-11800	Reel Plate Assy, Tackup	1
50	141-2-453T-30101	Washer 2.1 x 4 x 0.25 Nylon	7
51	141-2-547T-02100	Roller	1
52	141-0-581T-10600	Gear Assy, F FWD	1
53	141-2-853T-54500	Spring Plate	1
54	141-2-457T-13300	Special Washer	1
55	141-2-453T-30500	Washer 4.1 x 6.5 x 0.13	2
56	141-2-671T-05500	Cum	1
57	141-2-855T-23500	Spring Coil	1
58	141-2-457T-13000	Special Washer	1
59	141-2-453T-30501	Washer 4.1 x 6.5 x 0.25 Nylon	1
60	141-2-457T-23700	Special Washer	2
61	141-0-531T-11801	Reel Plate Assy, Supply	1
62	141-2-457T-14000	Special Washer	1
63	141-2-457T-14100	Special Washer	1
64	141-2-457T-11000	Special Washer	3
65	141-2-581T-10700	Gear, Rew	1
66	141-2-855T-23200	Spring Coil	1
67	141-2-161T-26500	Push Button Rew	1
68	141-0-551T-01720	Idler Assy	1
69	141-2-661T-26600	Pulley	1
70	141-2-852T-47800	Spring Wire	1

Ref. No.	Part No.	Description	Q'ty
71	141-2-453T-30001	Washer 1.7 x 3.2 x 0.25 Nylon	2
72	141-2-853T-54400	Spring Plate	1
73	141-2-457T-13100	Special Washer	1
74	141-0-581T-10400	Gear Assy, FF, Rew	1
75	141-0-581T-10500	Gear Assy, FF	1
76	141-2-457T-14000	Special Washer	1
77	141-2-855T-23400	Spring Coil	1
78	141-2-457T-13600	Special Washer	1
79	141-2-564T-18300	Squar Belt	1
80	141-2-671T-05600	Cum	1
81	141-2-661T-26400	Pulley	1
82	141-2-855T-30300	Spring Coil	1
83	141-2-564T-18400	Squar Belt	1
84	141-0-742T-14100	Lever Assy	1
85	141-2-855T-23101	Spring Coil	1
86	141-2-457T-14300	Special Washer	1
87	141-2-742T-13900A	Lever	1
88	141-2-855T-26300	Spring Coil	1
89	141-0-731T-59100	Slide Assy, Pause	1
90	141-0-747T-17200	Bracket Lever Assy	1
91	141-2-742T-13800	Lever, Pause Lock	1
92	141-2-852T-47700	Spring Wire	1
93	141-2-453T-00800	Washer 3 x 8 x 0.5	1
94	141-2-731T-59100	Slide, Stop	1
95	141-0-731T-61200	Slide Assy, Play	1
96	141-2-855T-26500	Spring Coil	1
97	141-2-731T-59000	Slide, F. FWD	1
98	141-2-853T-54800	Spring Plate	1
99	141-2-731T-58800	Slide, Rew	1
100	141-2-853T-54700	Spring Plate	1
101	141-2-731T-58700	Slide, Rec.	1
102	141-2-855T-23000	Spring Coil	3
103	141-2-731T-64300	Slide, Eject	1
104	141-2-855T-30200	Spring Coil	1
105	141-2-855T-29500	Spring Coil	3
106	141-2-742T-14000	Lever, Pause	1
107	141-2-731T-60900	Slide, Brake	1
108	141-2-712T-02700	Brake Shoe	2
109	141-2-852T-49000	Spring Wire	1
110	141-2-742T-14200	Lever, Stop Eject	1
111	141-2-852T-47500	Spring Wire	1
112	141-2-731T-59200	Slide	1
113	141-2-683T-34200	Ring	1
114	141-2-853T-54600	Spring Plate	1
115	141-2-457T-06600	Special Washer	1
116	141-2-731T-59300	Slide	1
117	141-2-852T-47600	Spring Wire	1
118	141-2-731T-61100	Slide, Lock	1
119	141-2-490T-08301	Tube	1
120	141-2-490T-08000	Tube	1
121	141-2-611T-11202	Lever, Push Button, Play/F. FWD, Rew	3
122	141-2-611T-11301	Lever, Push Button, Stop, Eject	1
123	141-2-611T-11401	Lever, Push Button, Pause	1
124	141-2-611T-11203	Lever, Push Button, Rec.	1
125	141-2-753T-34300	Shaft	1
126	141-2-457T-23600	Special Washer	2
127	141-0-737T-05900	Bracket Slide Assy	1
128	141-0-742T-19700	Lever Assy, Rec. Select	1
129	141-2-742T-19800A	Lever, Stop	1
130	141-2-742T-19900	Lever, Play	1
131	141-0-581T-11900	Gear Assembly	1
132	141-0-731T-61000	Slide Assembly	1
133	141-2-855T-25300	Spring Coil	1
134	141-2-742T-19600	Lever	1
135	141-2-852T-48900	Spring Wire	1
136	141-2-853T-56800	Spring Plate	1
137	141-2-365T-10100	Bracket Switch	1
138	141-2-231T-51300	Switch, Muting	2
139	141-2-453T-30200 141-2-453T-30201 141-2-453T-30202	or Washer 2.5 x 5 x 0.25mm, Nylon	1
140	141-2-453T-30100	Washer	1
141	141-2-457T-04100	Washer	1
142	141-2-351T-46300	Bracket Mounting	1
143	141-2-457T-23100	Special Washer	1

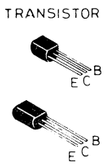
Ref. No.	Part No.	Description	Q'ty
MECHANISM SCREWS			
Y1		Pan Head Screw with Spring Washer 2.6 x 4mm	8
Y2		Pan Head Screw with Spring Washer 3 x 4mm	1
Y3		Washer 3 x 8 x 0.5mm	3
Y4		Flat Head Screw 3 x 16mm	1
Y5		Pan Head Screw 3 x 6mm	2
Y6		Washer Head Tapping Screw 3 x 6mm	10
Y7		Pan Head Screw 2 x 10mm	3
Y8		Spring Washer 2mm	3
Y9		Flat Head Screw 2 x 11mm	1
Y10		Tapping Screw 3 x 6mm	1
Y11		Washer 2 x 6 x 0.5mm	1
Y12		Tapping Screw 2.3 x 6mm	2
Y13		Pan Head Screw 3 x 18mm	1
Y14		Washer 3 x 10 x 1mm	1
Y15		Washer Head Tapping Screw 3 x 8mm	1


Y15
32
22
34
138
Y14
Y1
137
142
24
130
Y12
143
128
B
C
C'
B'
A
A'
33
29
129
Y13
43
85
88
139
Y6
127
87
14
28
16
20
15
19
Y3
18
105
102
98
101
95
99
100
97
94
89
119
110
Y12
141
135
115
114
103
90
134
86
120
104
92
91
93
116
113
84
112
118
133
132
68
50
69
71
12
11
79
64
78
31
77
76
72
73
74
75
17
Y2
13
70
111
117
131
136
83
81
82
80
1
8
30


Y7
Y8
41
Y9
48
37
39
42
24
23
36
40
Y6
38
96
35
49
61
Y10
45
44
108
107
106
109
46
47
123
122
121
124
125
25
27
26
Y5
126
50
4
3
5
2
Y1
Y4
24
7
6
140
51
52
53
54
55
56
57
58
59
Y11
60
62
63
64
65
66
67
10
9

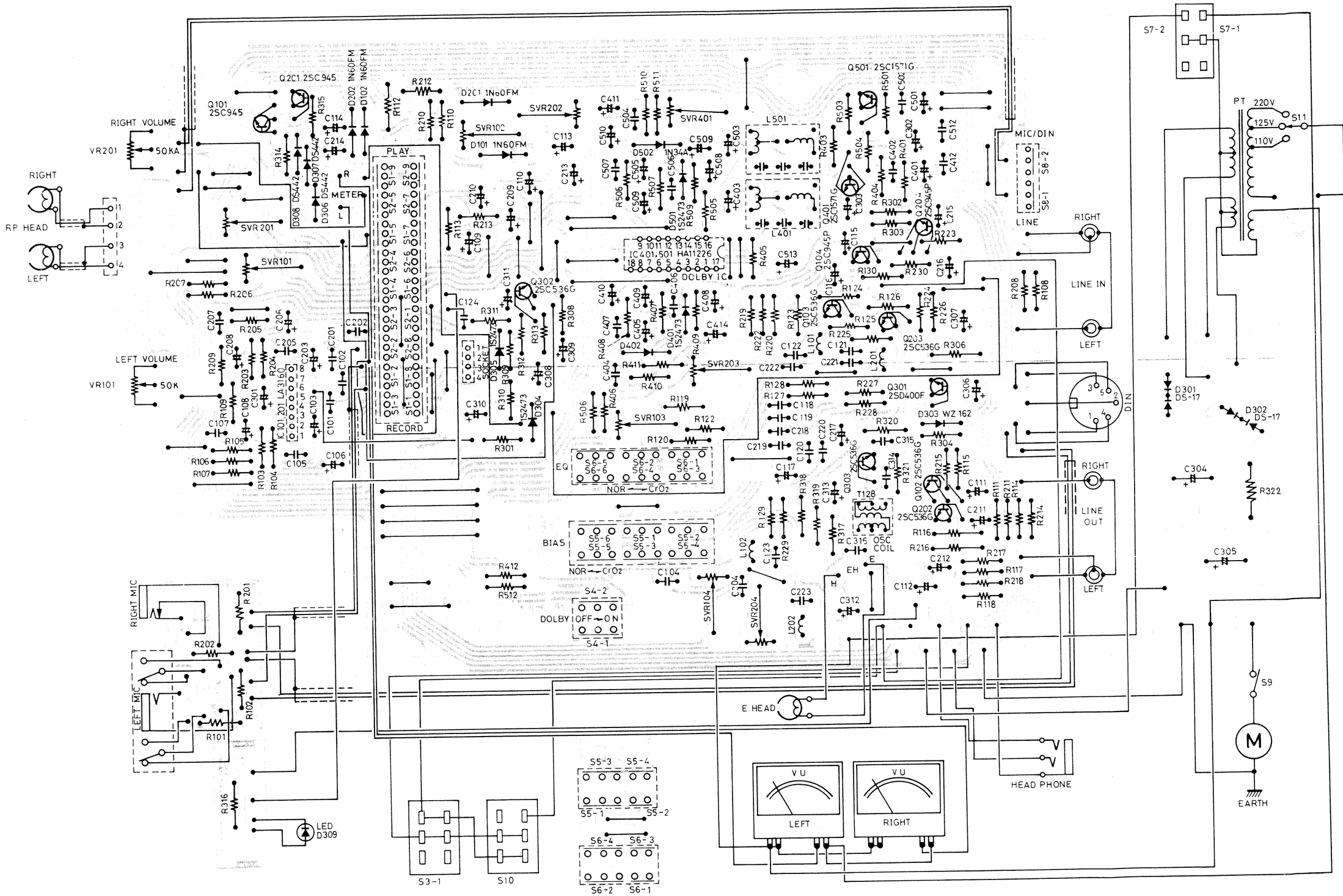


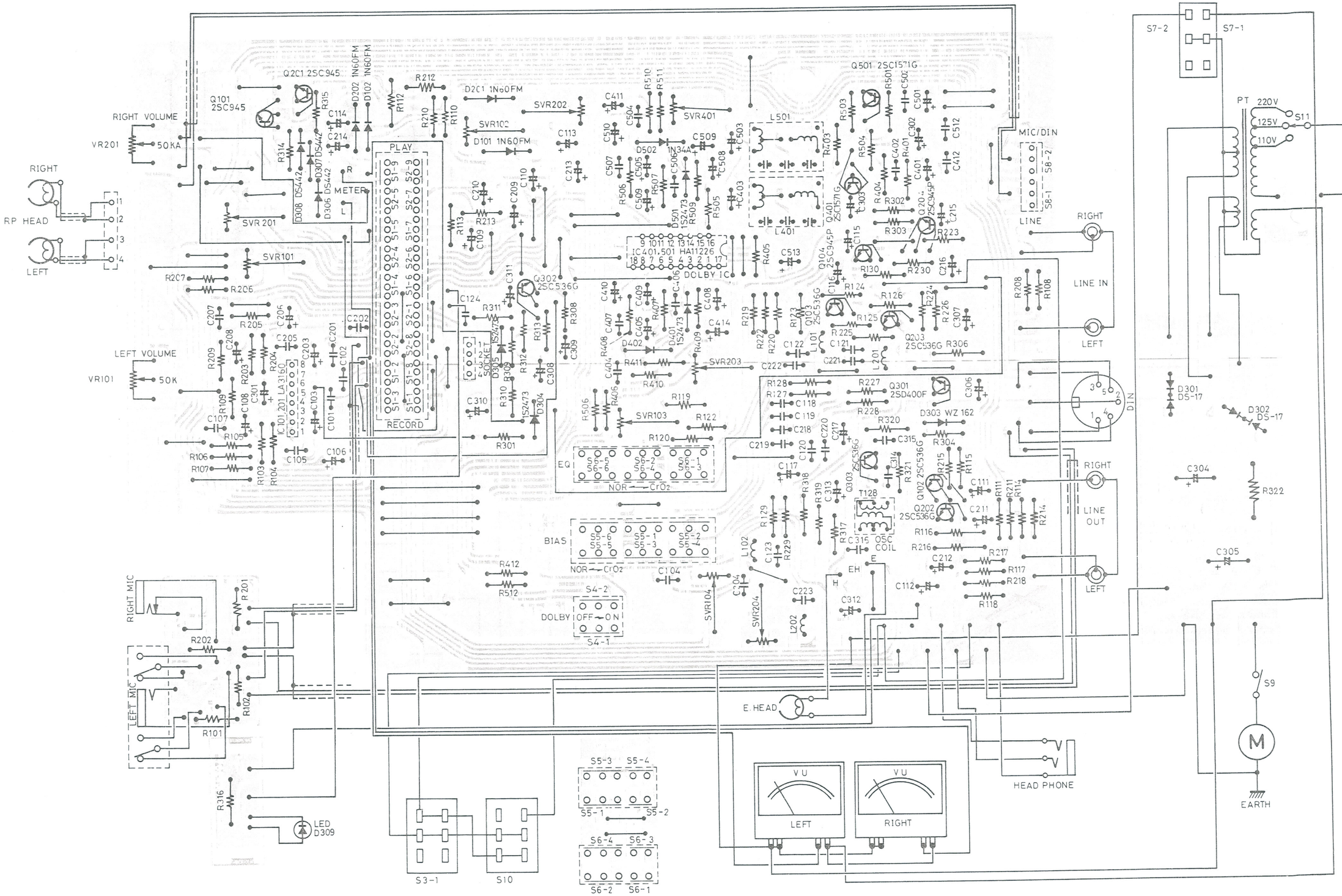
TRANSISTOR CONNECTION



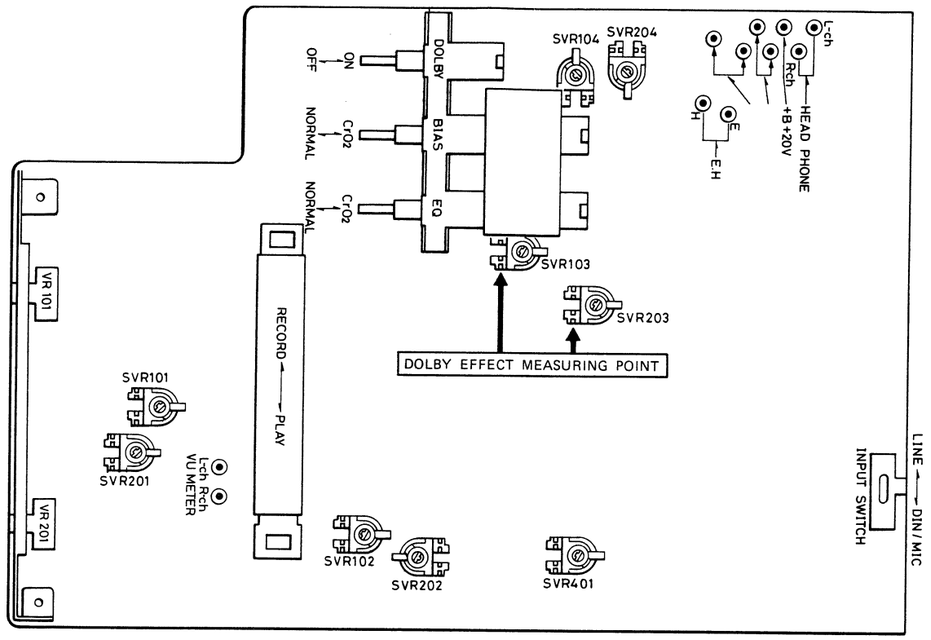
S1-1 ~ 1-9 --- RECORD PLAY SWITCH
S2-1 ~ 2-9
S3-1 ------- PLAY SWITCH
S4-1 ~ 4-2 --- DOLBY SWITCH
S5-1 ~ 5-6 --- BIAS SWITCH
S6-1 ~ 6-6 --- EQ SWITCH
S7-1 ~ 7-2 --- POWER SWITCH
S8-1 ~ 8-2 --- INPUT SELECT SWITCH
S9 ------- MECHA SWITCH
S10 ------- STOP SWITCH
S11 ------- VOLTAGE SELECT SWITCH

VOLTAGE PLAY / RECORD


RIGHT VOLUME
VR201
50KA
LEFT VOLUME
VR101
50K
RP HEAD
RIGHT
LEFT
Q2C1 2SC945
Q101 2SC945
D2C1 1N60FM
D202 1N60FM
D102 1N60FM
D101 1N60FM
D502 1N34A
Q501 2SC1571G
Q401 2SC1571G
Q104 2SC945P
Q204 2SC945P
Q302 2SC536G
Q103 2SC536G
Q203 2SC536G
Q202 2SC536G
Q102 2SC536G
Q301 2SD400F
D303 WZ 162
D401 1S2473
D501 1S2473
D305 1S2473
D304 1S2473
IC101,201 LA3160
IC401,501 HA11226
DOLBY IC
L501
L401
L101
L201
L102
L202
T128
OSC COIL
SVR201
SVR101
SVR202
SVR401
SVR203
SVR103
SVR104
SVR204
PLAY
RECORD
METER
EQ
NOR — CrO2
BIAS
DOLBY
OFF — ON
MIC/DIN
LINE
LINE IN
LINE OUT
DIN
RIGHT
LEFT
RIGHT MIC
LEFT MIC
E. HEAD
EH
H
E
VU
LED D309
HEAD PHONE
S7-2
S7-1
PT
220V
125V
110V
S11
AC240V 50Hz
D301 DS-17
D302 DS-17
S9
M
EARTH
S1-1 S1-2 S1-3 S1-4 S1-5 S1-6 S1-7 S1-8 S1-9
S2-1 S2-2 S2-3 S2-4 S2-5 S2-6 S2-7 S2-8 S2-9
S3-1
S10
S4-1
S4-2
S5-1 S5-2 S5-3 S5-4 S5-5 S5-6
S6-1 S6-2 S6-3 S6-4
S8-1 S8-2


RIGHT VOLUME
VR201
50KA
RIGHT
RP HEAD
LEFT
LEFT VOLUME
VR101
50K
Q101 2SC945
Q2C1 2SC945
D202 1N60FM
D102 1N60FM
D2C1 1N60FM
D101 1N60FM
D502 1N34A
D308 DS442
D307 DS442
D306 DS442
METER
SVR 201
SVR101
SVR102
SVR202
SVR401
SVR203
SVR103
SVR104
SVR204
PLAY
RECORD
S1-3 S1-2 S2-2 S2-3 S1-4 S1-5 S2-4 S2-5 S1-9
S1-1 S1-8 S2-8 S2-1 S1-6 S2-6 S1-7 S2-7 S2-9
IC101 LA3160
IC401,501 HA11226
DOLBY IC
SOCKET
Q302 2SC536G
Q103 2SC536G
Q203 2SC536G
Q202 2SC536G
Q104 2SC945P
Q401 2SC1571G
Q501 2SC1571G
Q301 2SD400F
Q201 2SC945P
D305 1S2473
D304 1S2473
D401 1S2473
D501 1S2473
D402
D303 WZ 162
L501
L401
L101
L201
L102
L202
T128
OSC COIL
EQ
NOR ⟷ CrO2
BIAS
S5-6 S5-5 S5-4 S5-3 S5-2 S5-1
S6-5 S6-6 S6-4 S6-3 S6-2 S6-1
S4-2
S4-1
DOLBY OFF ⟷ ON
MIC/DIN
S8-1 S8-2
LINE
RIGHT
LEFT
LINE IN
LINE OUT
DIN
E. HEAD
EH
E
H
VU
LEFT
RIGHT
HEAD PHONE
RIGHT MIC
LEFT MIC
LED D309
S3-1
S10
S7-2
S7-1
PT 220V
125V
110V
S11
AC240V 50Hz
D301 DS-17
D302 DS-17
S9
M
EARTH

PARTS LOCATION



MECHANISM ADJUSTMENT

TORQUE ADJUSTMENT

1. Set the unit to the PLAY, FAST FORWARD or REWIND mode.
2. Measure the each torque with a torque gauge. They should be as following;

PLAY	35 – 60 g/cm
FAST FORWARD	55 – 95 g/cm
REWIND	60 – 100 g/cm

3. If the each torque fails to reach the standard value. Clean the drive belt, flywheel, motor pulley, take-up reel, idler and rewind roller with a cotton swab soaked in alcohol.

TAPE TENSION

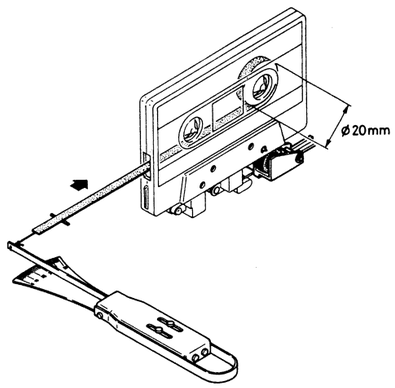
Cut off part of tape as shown on the right. Tie a cord to one end, and leave the other end free at the right side of pinch roller. Press PLAY lever and fix the grip of tension gage, then the needle remains still.

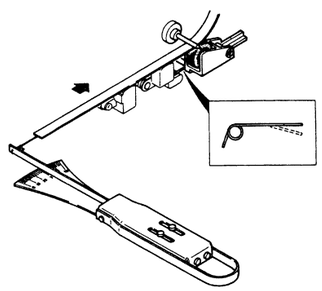
The tension when the tape stops is specified as follows:

Fast-forwarding . . . . more than 120 gr

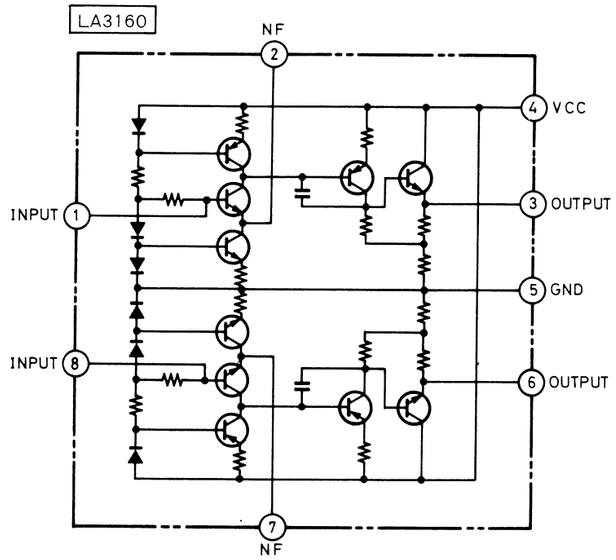
If this value is not satisfied, adjust the spring of mechanism No. 38 (141-2-852T-47400).

Keep the spring roller always clean and neat so as not to permit slipping.

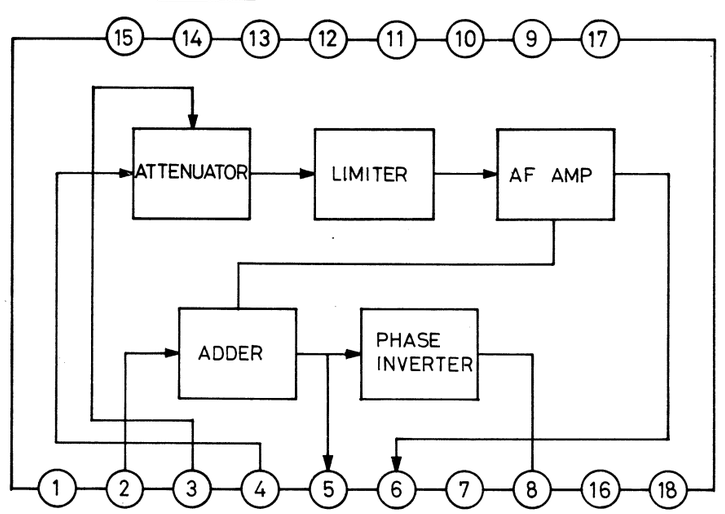




LA3160



HA11226



① LAW CONTROL
② INPUT
③ BYPASS
④ INPUT
⑤ OUTPUT
⑥ OUTPUT
⑦ BYPASS
⑧ OUTPUT
⑨ OUTPUT
⑩ BYPASS
⑪ OUTPUT
⑫ OUTPUT
⑬ INPUT
⑭ BYPASS
⑮ INPUT
⑯ REFERENCE
⑰ V^+
⑱ GROUND

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